



THOMAS G. NEWMAN,
EDITOR.

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The Heddon Hive has been placed in our Museum, and we have made a pretty thorough examination of it. It suggests the handling of hives instead of frames, thus lessening the labor of bee-keeping, curtailing the expense of honey-production, and adding to the profits of the apiarist. It and the system of management for which it was constructed, presents a "new departure" in many essential points, and will doubtless receive a thorough discussion by the correspondents of the AMERICAN BEE JOURNAL.

As it is claimed by some that the hive and system of management will cause a "revolution in bee-keeping," it becomes the prerogative of the apiarists of America to give the system a critical examination. This should be discussed in a friendly manner, with the sole object of arriving at the truth, and neither *prejudice* nor *interest* should be allowed to influence any opinion. Only a calm and deliberate discussion, after a thorough investigation of the merits or demerits of both the hive and system, can be of any value to apiarists generally.

The "claims" which Mr. Heddon makes on his system, are to be found on page 73, and to these the readers are referred in order to obtain a right understanding at the start.

Mr. Elias Thomasson, a bee-keeper of Louisville, Ky., and one of our subscribers, died of apoplexy at 9:30 a.m., on Jan. 11, 1886, in the 76th year of his age. After eating a hearty breakfast, he started out to give his little grandchild a ride on her sled. They went into Dobbin's drug-store to get warm. Suddenly he began to stagger, and before help could be given him, fell upon the floor. Everything possible was done for him at once, but in a few moments he was dead.

Two new Bee-Papers are received:—The *Bee-keepers' Index*, an 8-paged monthly published at 25 cents a year, by W. P. Beach, Ovid, Mich.; and *Rays of Light*, a 12-paged monthly, published at 50 cents a year, by J. J. Martin, North Manchester, Ind.

The Convention Pamphlet is well received. The following is a sample of scores of letters received concerning it:

BRO. NEWMAN :—The History of the North American Bee-Keepers' Society has come to hand. I am glad you have the enterprise to put in compact form what may be very valuable for reference in the future; and while on the subject of enterprise, allow me to congratulate you, first, on being the pioneer to publish a weekly bee-paper, and secondly, on reducing the price so that no bee-keeper can afford to do without it.—C. C. Miller, Marengo, Ills.

You have done a great amount of work to produce such an important and interesting work. It should be in the library of every bee-keeper. It contains much valuable matter.—H. D. Cutting, Clinton, Mich.

You certainly deserve much credit for crowding so much of the early history of the Society into so few pages, and those who wanted the proceedings of the Detroit Convention published in pamphlet form, can now receive it in excellent shape, and there will be no more trouble in hunting over several papers to find the whole proceedings.—W. Z. Hutchinson, Rogersville, Mich.

We commend your enterprise in getting up so valuable and interesting a work.—Clemons Cloon & Co., Kansas City, Mo.

It is a valuable publication.—W. T. Falconer, Jamestown, N. Y.

The "History of the North American Bee-Keepers' Society," etc., is received. I am delighted to have so great amount of matter of interest, relating to apiculture, condensed into so small a space for reference. Notwithstanding I have very nearly a complete file of the AMERICAN BEE JOURNAL, extending back to its first issue, I am none the less delighted with the "Brief History."—G. W. Demaree, Christiansburg, Ky.

You have my thanks for preparing the "Brief History of the North American Bee-Keepers' Society." It will save valuable time in hunting up references; is well edited, and the typographical execution is excellent.—Mrs. L. Harrison, Peoria, Ills.

The Convention History is at hand. It is a very nice book. Indeed, in every way, and cannot fail of being appreciated by all those interested in Conventions.—G. M. Doolittle, Borodino, N. Y.

New Price-Lists have been received from the following persons:

Deere & Co., Moline, Ills.—120 pages—Plows and Cultivators. It is an elegant production, artistically and typographically considered.

A. C. Nellis & Co., Canajoharie, N. Y.—96 pages—Floral and Garden Seeds.

Joseph Harris, Rochester, N. Y.—72 pages—Vegetable and Flower Seeds.

J. B. Mason & Sons, Mechanic Falls, Maine.—50 pages—Italian Bees, Queens, and Apian Supplies.

E. T. Lewis & Co., Toledo, O.—32 pages—Honey Extractors, Smokers, Foundation, Hives, Sections, Crates, etc.

C. F. Muth & Son, Cincinnati, O.—32 pages—Bee-Keepers' Supplies.

J. T. Fletcher, Clarion, Pa.—8 pages—Bees and Poultry.

Wm. Henry Maule, Philadelphia, Pa.—56 pages—Seeds of all kinds.

Any one desiring a copy of either of them, can do so by sending a postal card to the address as given above.

The Convention History of America and the AMERICAN BEE JOURNAL for one year, will be clubbed for \$1.15.

We respectfully call the attention of every subscriber to the seed advertisement of JAMES J. H. GREGORY, Marblehead, Mass. His large and complete catalogue is sent free.

The Rev. Robert West, editor of the *Advance*, of this city, to whom reference was made on page 19, in that paper of Jan. 21, acknowledges the receipt of our demand for a "full retraction and apology," but instead of doing that, makes another charge from a correspondent who says he has "reason to believe that there was an establishment on — street in Chicago that manufactured bogus honey," and gives this as the *modus operandi*:

"It was said to be done by extracting the genuine honey from the comb with the machines in common use for that purpose, then placing in a sunny room the comb, a number of shallow dishes of cheap sugar, glucose, molasses and water and a swarm of bees! It was said that the industrious bees, rather than remain idle, would go to work and place the above mixture in the empty comb, but it was of course not honey, although apparently put up in genuine packages."

The Reverend gentleman also alleges that he is "familiar" with the "room" where this is done, but adds that "the room is not now so sunny as it might be, and there is reason to surmise that cheaper carriers have been substituted for the bees which the writer mentions."

The first witness brought forward only says he has reason to believe that there is such an establishment, and that it was said to be done in the manner mentioned. He knows nothing about it, except hear-say, and frankly says so; but the Rev. Robert West says he is familiar with the establishment, and surmises that they have found a substitute for the bees!

Now, Mr. West should be honest enough to mention the street and number, and give the name of the proprietor. This he can do, for he is familiar with the establishment! We demand the facts!! A clergyman should be honest; and should be ever ready to "tell the truth!!" Surmising will not do for proof.

In the first article on Dec. 31, 1885, Mr. West asserted positively that "men have learned not only to manufacture the comb, but now fill it, capping the so-called honey-cells by machinery," etc.; but when asked to "retract" or "prove" the assertion, he drops the "machinery" part, and claims that the bees do the work, and are the adulterators!! He dodges the issue!

We affirm most positively that the Reverend gentleman's assertion about comb being made, filled and capped by machinery, is a base fabrication; and we thus publicly DEMAND the proof, or a full retraction and apology! Dodging the issue; surmising; or bringing witnesses who "have reason to believe" this, that or the other thing; or averring that "it was said to be done" by some unknown person, will not answer! Give us the plain, naked, absolute facts—the proof. Now it is Mr. West's turn—let him speak out! Either prove the assertion, or prepare to defend a suit for damages done to the pursuit of bee-keeping, by his bold and base assertions!

We deprecate adulterations of all kinds, and would favor a law to put adulterators in the pillory, or flog them at the whipping-post; and we also detest those who show their ignorance at every turn, by denouncing honest products, and injuring an industry by their stupid or malicious blunders!



WITH

REPLIES by Prominent Apirists.

Origin of Honey, etc.

Query, No. 189.—Where does the honey come from? Is it in the ground just waiting for the right kind of flowers to grow so that the atmosphere can pump it up through them? Is there any danger of its being all pumped out? Does the same combination of elements that makes plenty of honey, also make the sorghum-stalk and the sweet-potato sweet? Did you ever notice that poor honey years were poor sorghum years, and that the sweet-potatoes were not sweet? I know that it was the case here the past year. An old molasses-maker says that none of the sorghum brought to the mill this year made more than half a crop, and I know that our sweet-potatoes were not sweet, as in other years.—Vermont, Ills.

I will try and answer this in sections as asked: 1. From the nectar of flowers. 2. Yes. 3. No. 4. Nearly so. 5. I have never noticed any difference.—H. D. CUTTING.

Honey is made from the nectar of flowers, and is as thin as water when first collected. The nectar is a secretion by the nectariferous glands of flowers. A proper humidity of the soil and warmth are among the conditions most essential to free nectar-secretion.—G. L. TINKER.

The honey comes from the ground the same as does the milk that Old Brindle gives. It is not unlikely that weather that would effect nectar-secretion might possibly effect cane and sweet potatoes. As I never raise cane, I am not authority on that point. When the cow pumps all the milk out of the ground, then we may fear a dearth of nectar in the flowers.—A. J. COOK.

Top-Storing.

Query, No. 190.—I am satisfied that I do not have sufficient room on top for surplus honey, and so I desire to ask whether side storage could be adopted successfully. My American hives have 10 frames, 12x12 inches. Could I not take out 3 or 4 combs at the beginning of the basswood harvest and fill the space with sections, replacing the combs after the basswood harvest is over? Would the queen not use those sections for brood? If so, how could I prevent it?—E., New York.

The plan could be successfully adopted, and the queen could be kept out with perforated-zinc. Had I such hives I should change to such a style that gave an abundance of room for top-storing.—W. Z. HUTCHINSON.

Look at Mr. Doolittle's articles in some of the past numbers of the AMERICAN BEE JOURNAL. He makes a success of side-storing. I would

rather get new hives, if necessary, but by tiering-up you ought to be able, on your present hives, to have 200-pounds surplus room. Is that not enough?—C. C. MILLER.

Wide-frames with sections may be used at the side of such hives in the manner indicated, and perforated-zinc or a slotted division-board used to keep out the queen. I have used just this arrangement with deep frames, but I do not like it.—G. L. TINKER.

Side-storing can be adopted, but it is not desirable; unless the sections are carried above for completion, they are not nice. The queen can be kept out by the use of a queen-excluding division-board. I think it much better to put crates of sections above, and tier up till all desired space is given.—A. J. COOK.

The queen would not get much chance here to use the side sections for breeding in basswood time. Queen-excluding metal would prevent her from reaching them at any time. I think that the removal of "3 or 4," or even 5 combs, after June 1, will be advantageous; and if once tried you will continually practice it thereafter.—JAMES HEDDON.

I should do as you suggest. With me, queens are not as apt to go into the side boxes as into those on top. Eight American frames are enough for any time of the year for a brood-apartment, and 5 would be ample when practicing the contraction method.—G. M. DOOLITTLE.

If you have not room on top, "make room;" then if you cannot get it on top, cut down your frames. You can get honey stored in sections in the brood-chamber, but you do not want to; at least you would not if you lived in my locality.—H. D. CUTTING.

My favorite remedy would be to get the bees out of such a hive as you describe, as soon as possible. But others will differ from me about this. With the cases I use in my apiary, either for holding sections or shallow frames, your hives could be "tiered-up" till your bees would have all the room they could utilize. "Side-storing" as a system, in a large apiary is objectionable on account of disagreeable manipulation in the brood nest, and additional labor in many ways.—G. W. DEMAREE.

Side storing in American hives in sections has never been a success with myself. Perhaps it would prove more satisfactory in other localities. I can see no reason why room enough cannot be given by tiering up. I have tiered-up American hives 7 to 10 cases of sections high, and found that the bees would work well in the upper tier, if care was taken to protect them by blankets and quilts.—J. E. POND, JR.

If you use side-storing sections or crates you had better make larger hives, as your hives are not any too large for breeding. We tried side-storing for 5 years on about 60 American hives enlarged so as to take 20-pounds on each side, simultaneously with top-storage, and the side-storage

was a total failure, owing to the storing of pollen in this side honey, and insufficient filling of the crates at the side unless the bees were exceedingly crowded. Your American hives ought to have 13 brood-frames; this would also increase your surplus top-room.—DADANT & SON.

Closing in Bees with Wire Screens.

Query, No. 191.—What are your opinions about closing bees in with wire screens? We use a modified Simplicity hive, with a portico 3 inches deep, and when we put them into the cellar we covered the porticos with wire screens, the wire being 3 inches from the opening in the hive. We feel a little uneasy about them. There are 15 colonies. We saved 7 colonies out of 8 that were so prepared last year.—Linn Co., Iowa.

I am opposed to closing in bees, but if you keep the screen cleaned off you will have no trouble.—H. D. CUTTING.

Wire-cloth tacked over a portico would be less objectionable than to tack it directly over the entrance. I do not believe that either one is of service, except to keep out mice.—G. L. TINKER.

If the bees remain quietly in the hives without knowing that they are confined, it will make no difference; but if they discover that they are confined, and begin to worry, the results may be very serious.—G. W. DEMAREE.

I consider the screens worse than useless; just so much worse as is their cost and the labor of putting on. As a rule they will not effect the wintering of the bees one way or the other as you have them prepared.—G. M. DOOLITTLE.

The screens prevent the dead bees from being scattered on the floor; aside from this I do not know what good they do. If they caused the bees to worry, trying to get out, I should remove them. I do not advise their use.—W. Z. HUTCHINSON.

We prefer to put the bees in the dark and leave the hives open. Those bees that go out die anyhow if confined. They leave because they are ill at ease. You may always expect to lose some bees that way in the cellar.—DADANT & SON.

I have never wintered bees in special depositories, but on principle, and from careful study of the experiments of those who have made it a success, I should advise leaving the entrances entirely unclosed, but keeping the depository completely and utterly dark.—J. E. POND, JR.

I was once in the cellar, of Mr. E. D. Godfrey, of Red Oak, Iowa, and saw about a hundred colonies fastened in with screens, the only ones I ever saw thus fastened. They were then in fine condition, but I do not know how they came out. I wish that he would tell us. I think that I should rather have the entrances open—at least cleaned out every 2 or 3 weeks.—C. C. MILLER.

I should prefer to have nothing over the entrances. If they do get uneasy and try to get out, this will irritate them, while the fact that they can come out is not undesirable. Such a screen could serve no good purpose except to keep mice out, and if mice are in the cellar, they should be caught in a trap.—A. J. COOK.

I cannot discover as yet just what caused many of my healthy bees to leave their hives, fall, and perish on the cellar bottom. I have thought that such a device as yours (which has been used by others) might be valuable. I do not think that it can produce any bad results the way you have it arranged.—JAMES HEDDON.

CORRESPONDENCE

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ⊙ indicates that the apiarist is located near the centre of the State named: ♂ north of the centre; ♀ south; ◐ east; ◑ west; and this ♂ northeast; ◒ northwest; ◓ southeast; and ♀ southwest of the centre of the State mentioned.

For the American Bee Journal.

Whom do Bee-Conventions Benefit?

DR. C. C. MILLER, (179—340).

Some time ago a prominent writer in bee-culture asked me the question, "For whose benefit are bee-conventions?" I have never seen the question answered, and I am not sure whether I can give a correct answer in full, although I have given it some thought. It is a matter, however, deserving of some attention, since the manner in which the time is occupied at a convention, depends largely upon the conception had, as to the object of the convention.

As to the importance of the manner in which the time is occupied, it is only necessary to consider the thousands of dollars which these conventions annually cost. Take the meeting of the late Detroit convention. Estimate the average traveling expense of each member at \$10; living expenses for four days (or parts of four days including coming and going) at \$1.25 per day—\$5; time lost, \$5; making \$20, probably a very low estimate; but if 100 are in attendance it amounts to \$2,000. Other conventions will cost much less, but there are a great many of them.

I suppose in the case of many individuals the pleasure of social intercourse will amply recompense all cost. I suspect, however, that these meetings would not be very largely attended were it not for the expectation of information to be gained.

Receiving and giving information is probably the prime object of bee-conventions.

In attendance are found those who are interested to different degrees in bee-culture, from the man who makes his entire dependence upon the business for his bread and butter, to the one who has one or two colonies, to which he never has given (and perhaps never will give) much attention. I suppose it is desired that all these classes shall attend—certainly pressing invitations are given to them. Although all these different classes may find something of value in any convention, it is hardly to be supposed that the grade of information most needed by the beginner will be such as to be most valuable to the veteran.

Perhaps it may be well, right here, to consider what are some of the sources whence one can obtain light as to bee-keeping. I may name these: Observation, experiment and experience; conversation with, or instruction from other bee-keepers; books upon bee-keeping; periodicals devoted specially to bee-keeping; and conventions. I do not now think of other sources. Perhaps the last three, or, omitting conventions, books and periodicals alone are sufficient for a tolerably full course of instruction in theoretical bee-keeping. Under ordinary circumstances, if a young man with no knowledge of the business, but contemplating entering upon it, should ask my advice as to going 200 or 300 miles to attend a convention, I should advise against it. He had better take the money and invest it in books and bee-papers. Let him post himself thoroughly in the several (mind you I don't say *one* of the several) excellent bee-books. But no matter how familiar he may be with these, there are always new things coming up, thousands of bee-keepers are experimenting in different directions, and these things he can have the benefit of, by taking bee-papers. Indeed, if I were restricted to only one source of information outside of my own experience, I would unhesitatingly take the bee-papers. The days for the arrival by mail of my bee-papers are as distinctly marked in my mental calendar as are Saturdays in that of the school-boy; and I never expect to become so advanced in the management of bees that I shall not be interested in these printed messengers. What, then, is the need of conventions, if books and papers are so complete?

In reading a communication in a paper, no matter how fully the writer may treat his subject, there are likely to be left out points on which we would like to question him; at a convention we have the opportunity to do this. Then, too, at a convention, aside from the social privileges, there is a sort of mental stimulus from the meeting of so many interested in the same pursuit, that seems to stir up some to bring out important facts that otherwise might never come to light. Suppose, now, at a convention some one happens in who has a few bees—perhaps in box-hives—and he considers that here is a fine chance to

gain some information, so he begins asking whether the queen or the drone lays the eggs (and I have known something not so very far removed from this to happen); how much time do you think he ought to be entitled to occupy in this way? And yet the elementary facts, such as are familiar to even those of very limited experience are just the ones which this man needs to learn, and the time of the convention could not be spent more profitably, *to him*, than in dealing with just these elementary matters. But if the time were taken up in this way, how many, think you, would be in attendance whose experience and wisdom would make a convention valuable? It is not probable that diverse interests will allow all to be united in their views, but looking from the stand-point of one making bee-keeping not merely a recreation, but the means of livelihood, I should say that the chief participants should be (and perhaps they usually are) those of experience, who, by a mutual interchange of thought may each give and receive information. If the inexperienced, by their attendance, can catch some of the sparks as they fly, so much the better for the inexperienced.

Whilst upon this subject I will refer to another matter that needs correction. In the report of the Detroit Convention, page 810 of the AMERICAN BEE JOURNAL for 1885, it is stated, "Only about one-third present at the meeting had become members of the Society;" that is to say, about 200 persons were there who had the full benefit of the convention and contributed nothing toward it—not even the paltry sum required as an annual membership-fee. Is not this being a little *too* free?

Marengo, 3 Ills.

For the American Bee Journal.

Preserving Bee-Papers for Reference.

REUBEN HAVENS.

Having been confined to my room the greater part of the time for the last three months, with rheumatism, I have improved the time in reviewing and studying up bee-culture. I find the bound volumes of the AMERICAN BEE JOURNAL very convenient, and intensely interesting. I have an Emerson Binder in which I preserve the numbers throughout the year, and then have them neatly bound. With the index of subjects treated, and the index to correspondents, it is almost invaluable as a book of reference. In this way I often get needed information with but little trouble, and with no delay.

In no business is the motto "Strike while the iron is hot," or in other words, do everything in its right time, of more importance than in the bee-business; in fact, success almost entirely depends upon it. A little delay often causes heavy losses. If this view is correct, and I think every thoughtful person will accede to it, then no better investment can be made by bee-keepers than to take the

old reliable BEE JOURNAL, every number of it, and at the end of each year have them neatly bound; not merely for the name of having a bee-library, but for the purpose of close and persistent study.

These thoughts have been brought out by remarks of bee-keepers whom I have endeavored to persuade to subscribe for the AMERICAN BEE JOURNAL. One said, "I wouldn't give 15 cents for it;" another, "I think I will take it three or four months next summer;" but in every case where objection was made, there has been failure in the past, and undoubtedly will be in the future. In some cases the parties were very enthusiastic a year or two since, but now they are completely discouraged. In fact it requires some nerve to withstand the losses of the past two years, and keep a "stiff upper lip."

Onarga, O. Ills.

Read at the New York State Convention.

Development of the Honey Market.

R. F. HOLTERMANN.

Perhaps no theme, now that our bees are in winter quarters, is of greater interest to the producer of honey. I feel my deficiency in dealing with this subject, yet my labor will not be in vain if one new idea or thought is thrown out, if old ideas are more prominently brought before us, or more united efforts decided upon before the discussion closes.

Why should we cry about our markets being overstocked when all we have to do is to enlarge them, and thus increase the consumption of an article which will stand upon its own merits when once introduced? Our markets have not been fully developed, and consumption has not reached its full capacity until every man, woman and child uses this and no other sweet. What are the means to be employed? We can all suggest. Four years in attendance (generally selling honey) at the Toronto Industrial Exhibition has given me a few ideas of the difficulties to overcome.

We want to disseminate more knowledge about apiculture, not for the benefit of the bee-keeper, but in periodicals where it will reach the masses that know nothing about it; state the progress that apiculture has and is making; what vast quantities of honey are produced and consumed compared with former days, and how this progress permits of such a production. Little articles written as reading matter and news of the day, will do a vast amount of good to educate the masses to consume honey. They will be interested, and the idea of using honey brought before them again and again, will cause them to realize that if they do not use honey as a staple article they will not be up with the fashion; and that foolish feeling and idea which sets one-half the world blind to everything, can be made to work to our benefit and—for once—that of its slaves.

As soon as a new outlet is found for the sale of honey—be it to the pork-packer, tobacconist, or some other business—send an item to the paper of large circulation, stating that "pork-packers (or whoever they may be) are commencing to use honey successfully in their business, etc." If bee-keepers had the energy of the general-manager of some quack medicine, who works up such a market by judiciously appearing before the public, bee-keepers would soon find that they could not supply the demand, and as ours is an article of merit the market would not decrease. Therefore we want to do a liberal amount of advertising, setting forth the merits of this sweet above all others for children, invalids and people in sound health—something we never do except occasionally in a bee-paper, the last place it should be put to enlarge the market.

At exhibitions held in larger cities we want a large and prominent exhibit of honey and apiarian implements. Start by giving the directors a nice can of honey; they are human, and will interest themselves on our behalf as to space and general accommodation. Give our prominent people a sample if they do not buy, and after tasting they will generally leave an order and feel under an obligation to speak of the fine display and quality of your honey. Do not wait until a reporter makes himself known to you, but hunt out those of the leading papers, pave the way to their good graces by a little honey, and in that way the exhibit will receive an amount of attention by the public that it otherwise would not. Having in this way secured the co-operation of influential people and the public generally, it will soon become a habit for them to buy honey.

As to the quantity in packages: Regulate it yourself by the package you give them at first; you can come to a larger. Toronto people have been spoiled by too small a package down to a smaller, but hardly advance being placed upon the market. Five years ago we sold the bulk of our honey in 5 and 10-pound packages; a few in 2½, but the latter was the smallest. Year after year the size has decreased, and to-day it is as difficult to sell a 2½-pound, if not a 1-pound package, as it was five years ago to sell a 5 and 10-pound packages. The sellers are too blame for this, not the buyers. At your exhibition you will find so many wise heads ready to condemn the whole display, because it is too large; they say, "that cannot be all honey!" but you, who listen, know that they are a class who condemn with their own ignorance as a basis. Explain to all who will listen about bee-keepers, be courteous and endeavor to create a kindly impression, and you make a step in the right direction. After the exhibitions follow them up by establishing a general agency under a man who knows what is wanted, or if circumstances permit, sell honey yourself. Visit nice, clean groceries, fruit-stores and chemists, and there arrange to set up a neat display in the window or on the coun-

ter, and leave a stock to sell from. Do not be discouraged by the store-keeper saying, "No one asks for honey;" tell him it is because they do not see it to buy; even if the party has but little push, seeing it will bring customers.

Place honey upon the market at the right time. There is no use in rushing it on when small fruits, etc., are abundant, and see that the display is kept up. Put your name upon every package. Whether comb or extracted honey every effort should be made to place it upon the market in as uniform and attractive a manner as possible to the eye and palate. The sections should be white, clean and well preserved, and any inferior cases should be disposed of at your exhibitions by cutting from corner to corner, making four pieces, each attached to the side of a section; these can be sold upon the grounds in large quantities. Observe the utmost cleanliness with your extracted honey; seldom, if ever, extract it before it is one-third capped, then put into large, deep tanks, which will give neither taste or color to the honey, and in a few days the thin, green honey will find its way to the top, and can be removed; the remainder, if clover, should be sealed within a week's time; thistle, the same; basswood a little longer, and you have an article fit for any man. Keep dark honey from spring or fall separate; never place it upon the retail market, for it blocks the way for a more desirable article. Many more valuable suggestions will doubtless be thrown out by the discussions; may all have a beneficial effect.

I would suggest a discussion upon the advisability of placing extracted honey upon the market in a granulated form; then we would secure a uniformity in the appearance of the article. If we do our best, it will granulate; and we would educate the public mind to the fact that if granulated it is above suspicion.

Brantford, Ont.

For the American Bee Journal.

Wintering Bees, etc.

L. H. CROWELL.

On Dec. 4, 1885, we had a furious snow-storm, and it grew quite cold, so I put my 19 colonies and 1 nucleus into the cellar; as I had not enough to fill it, I built a room 8x8 feet, independently of the cellar-walls, out of boards, and lined it on all sides within with building-paper, making it perfectly dark. A 2-inch pipe runs from the centre of the room, commencing 6 inches from the floor, which is connected with the stove-pipe above by extending it into the stove-pipe 3 feet. Before I put my bees into the cellar there was a draft which would draw the blaze of a fire 2 inches to one side, so I was sure of good ventilation.

I have kept the temperature of the bee-room at 41° above zero most of the time. We had a thaw about Dec. 24

to 29, when it rose to 46°; but I kept it there until it became cold again, by using snow and salt. The mercury is about 3° lower outside of the room. When it is zero out-doors I open the outside doors of the cellar to purify the air. My bees have been very quiet, and there are very few that are dead—not more than a quart, both inside of the hives and on the cellar floor, and they are dry, so that there is not the slightest smell from decaying bees, and there is not the least sign of bee-diarrhea among my bees.

I was much pleased with Dr. Tinker's article on the hibernation of bees, page 5, for it confirmed several observations of my own. My bees bred late in November, and they are wintering partly on sugar syrup. They have about 6 inches of oat-hulls over them. These oat-hulls I obtained from an oatmeal mill in this place; they were so clean and easy to get that I thought they would be just the thing. I never saw a hive opened until April 7, 1885, when I got 10 colonies, which I have increased to 19. I lost one by swarming out after being hived. I secured 150 pounds of comb honey. White clover did not seem to secrete any honey, and for 3 weeks in the middle of April it was so cold that the bees could not fly.

I have 2 acres of Alsike clover for next year, and I expect to sow a bushel of the seed the coming season. I am glad that you are refuting that nonsense about manufactured honey. Give them the law!

Rockford, 3 Ills.

For the American Bee Journal.

Quinby Standing-Frames, etc.

H. L. JEFFREY.

On page 28, Mr. T. M. Coleman asks for further explanation of the reversible frame mentioned in my report on page 821 of the AMERICAN BEE JOURNAL for 1885. The real dimensions of the Quinby standing-frame are, two end-bars, $1\frac{1}{2}$ inches wide, $11\frac{1}{2}$ inches long, and $\frac{1}{2}$ -inch thick; the top and bottom bars are nailed $\frac{1}{4}$ -inch from the end, towards the centre of the ends. They are cut from material $\frac{3}{4}$ of an inch wide, $\frac{1}{2}$ -inch thick, and 16 inches long, making the inside measure $16 \times 10\frac{1}{2}$ inches. The bottom-bar is only $\frac{3}{8}$ -inch thick, and the frame is fastened to the bottom-board by a hoop-iron hook.

As mentioned in my report in, 1877 all of my hives and frames were in use, and of the Langstroth size ($17\frac{1}{2} \times 9\frac{1}{2}$), with no material at hand fit to make frames of; but there were fifty or more of the above described Quinby standing-frames on the place, and by shortening the wide end-bar to $9\frac{1}{2}$ inches, from the original $11\frac{1}{2}$, they were made the Langstroth depth, and by driving a stout nail in the end of the frame, it made a hanging frame with closed ends. These frames were so used for the rest of the season, and I think that in 1878 some of them were used for nuclei hives, by laying

a piece of lath on a board for each end of the frame to rest on, and with 2 of the frames together and a piece of board on each side, a string tied around, a strip of board laid on the top, a 2-frame nucleus was set up on two standing-frames; I believe that several were made by setting the frames against one side of some of the occupied hives, with a division-board to cover the exposed side of the combs, and a few handfuls of earth to make the entrance the right size. In 1878, if I remember rightly, some of them were turned the bottom-side upward, to see if the bees would not fill the frame completely full of comb. The next thing was to see if they would be as likely to fill the lower corners of the frames with drone-comb, if the frame was turned bottom upward, and several trials showed that as apt as the bees are to fill out the extreme lower corners with drone-comb, just so sure they would fill it with worker-comb if the frame was inverted.

Then, to try the matter further, I made 2 or 3 Langstroth hive-bodies, rabbeted top and bottom with $\frac{3}{8}$ -inch square cleats 1-inch apart in each end of the hive, and cut from some of my Langstroth frames the drone-comb in the lower corners. Half of the combs were hung in the bodies in their proper position, and a cleat tacked across the ends. The hive was then set up on its end, and in the odd spaces combs were inserted from the bottom; thus the combs 1, 3, 5, 7, and 9 were tops upward, and 2, 4, 6, 8, 10 were bottom upward. As soon as the hive was put in its proper position, every comb which was bottom upward was filled out with worker-comb, and the others were filled out with drone-comb. The hive was then set upon its end again, and the combs drawn out, the drone-comb cut out, and the hive turned so as to bring the frames bottom upward, when worker-comb was built. After trying the Langstroth hive-bodies in 1880, 1881 and 1882, I learned that it was a positive law that the bees would move the honey to the sections from the reversed frames, when in its place eggs were deposited, actually making the colony stronger in bees and stores as the result. Thus I gained two points, viz., frames full of worked-comb, and the comb built firmly in the frame. I also received a strong hint as to how to get sections finished up and not to extract from the brood-chamber.

Now as to the closed-end frame: I observed that the combs were filled out with brood faster in the spring; that the hoar frost did not collect on the ends of the hive and project between the combs as it did on the regular narrow end-bar frame; that the bees were not as apt to fly out on those bright winter days because of the space between the frame and the hive; that every cold spell in the spring was not as plainly felt; and that in packing for winter the frames were pressed closely together and packed firmly, with leaves. If a hive was moved, there was no swinging of frames to irritate the bees. A comb with a queen-cell on it and a board

each side, would save a queen and much inconvenience. The nails for the projecting arms gave place to a strip of hoop-iron with a hooked end and a screw in the centre of the frame, and various other devices to invert frames, until 1885 when reversible wires were used, and so far they "fill the bill" satisfactorily, so that 1,000 pairs will be tried the coming season.

In 1883 I made a few frames the Langstroth size, with $1\frac{3}{8}$ -inch end-bars; in 1884 I made a few more of them, and in 1885 I worked them in 25 hives under various conditions, as a test for myself, and I used them with the vilest hybrids and the gentlest Italians and pure blacks to see how they worked; two or three others making similar tests with the same frame are satisfied, and expect to dispense with all but the reversible Langstroth frame with $1\frac{3}{8}$ -inch end-bars. The reversible frames have advantages enough to over-balance all objections.

REVERSIBLE HIVES.

On page 37, Rev. W. F. Clarke says, "Come on, Macduff!" So I will, but on the same side. I have not seen a description of Mr. Heddon's hive, or know aught of it except what I learned in that article, and from *Gleanings*; and if I have a correct idea of the hive, he is not alone, as there have been several hives in Connecticut of the same principle and construction; that is, with a horizontal dividing brood-chamber. I believe that some are now in existence, one being a movable-comb hive built in 1879 or 1880, the others of older patterns. In 1878 I transferred a colony from an old hive of that plan with slotted top and bottom. The principle, though old, is susceptible of many advantages. Though I have not seen Mr. Heddon's new book or circular, yet I can substantiate many of his claims from what I have seen of the principle of the hive, and, patent or no patent, I expect to try some hives of that principle this year. Washington Depot, Conn.

For the American Bee Journal.

Mr. Heddon's New Bee-Hive.

G. M. ALVES.

It seems that Mr. Heddon's new hive is on a boom. Mr. Hutchinson will run all of his next season's swarms into them, while the Rev. W. F. Clarke, with his refreshing enthusiasm, predicts that a revolution in bee-keeping is impending, and with glowing words, kindred to his announcement of the hibernation theory, in true chivalric style, throws down the glove and challenges each and all comers to raise it. Now, the writer has no disposition to meet the "shining lance" of the Reverend gentleman, nor to disparage the hive, but thinks that we should not be too hasty in throwing away what we have already found reasonably good.

Perhaps those who have been trying to follow the bright inventive genius

of Mr. Heddon, who at much expense of both time and money, and who have now about equipped their beeyards with what Mr. Heddon now calls "old goods," will with despairing sadness realize the fact that their fertile leader has again changed ground, and asks them to again throw away the old and accept the new. Perhaps to them it will seem rather too much for conservative and plodding human nature. Perhaps they will think that Mr. Heddon is too non-conservative to make a very good leader. Perhaps there are others who think that Mr. Heddon belongs to that class of men who live for the good of posterity; that his very bright and inventive mind originates too much, and runs into devious channels to make him a man of staid convictions; that the bee-world, as well as the outside world, require such men, but that it is posterity which soberly considers, cons over and selects for their use from the extended researches of such geniuses.

If there be bee-keepers of such opinions, shame on them all! Are those who unshrewdly guessed that inventive genius had reached its acme, to be re-imburged for loss sustained from their bad guessing? Or are those who will say that Mr. Heddon yesterday championed the hanging frame, and to-day chooses the Huber? that a short time since he battled valiantly with Mr. Doolittle for non-separators, and now prefers separators? Are these men to be heard? By no means! Who shall deny the right of change, or who shall cripple the wing of genius?

But with particularity to the hive, the writer propounds these questions without undertaking to answer them himself:

1. Is there not too much machinery about it?
2. Does it not require too nice mechanical work—too precise measurement of its details—to be readily adapted to general use?
3. Can men who pursue bee-keeping for profit afford, at the present price of honey, to use \$4 hives?
4. Will not the interchange of two shallow hanging-frame hives answer all practicable purposes of inversion? Henderson, Ky.

For the American Bee Journal.

My Experience in Bee-Keeping.

A. C. FASSETT.

On page 92 of the AMERICAN BEE JOURNAL for 1885, will be found my report for 1884, stating how I built up my apiary, the kind of hive that I use, etc., and that at the time I wrote, Feb. 9, 1885, I had in all 55 colonies of bees in winter quarters—15 packed on the summer stands, and 40 in the cellar; those in the cellar were kept dry and warm. I had no thermometer that I might see how the temperature ranged, though I know that it did not freeze there; in fact, they were kept the same as I had wintered them before with scarcely any loss.

I also stated the kind of bees that I had, and that I expected to Italianize all of them the next season. Well, I did do so, and with not much trouble, either, for I only saved 2 out of the 55 colonies, and one of them had a queen that would not lay. I had all of my bees in winter quarters by Nov. 23, 1884; some became restless in February, and Feb. 25 being the first day since Nov. 23 that was warm enough for bees to fly, I took them all out of the cellar for a flight, and found 3 dead colonies. On April 5 I took them all out of the cellar to stay, and found 29 colonies dead, and also 14 out of the 15 that were packed outside, were dead. All died with the diarrhea, I think, which left me 9 rather light ones on April 5, 1885.

They then began to dwindle, and I thought that they were all going, so I took all I could find and put them into 2 hives—queen and all—and the result was that I saved 2; but one of them had to do all the breeding for both until one could rear a queen. I kept them both strong by taking brood from the old queen. I then bought one good colony and 3 Italian queens in May, and was successful in rearing queens, so that by July 1 I had 30 small colonies, all doing finely; but on account of the scarcity of late honey, the fall breeding was a failure, so I united the colonies, and now have 17, some of which are weak. I wish that some prominent correspondent would write an article on how to handle colonies that are light in both bees and stores.

I have 14 colonies in the cellar and 3 outside. I put them all into the cellar at first, but they would not keep still, so I had to take the 3 out and pack them; up to this date (Jan. 22) I have not lost a single colony.

Watson, Mich.

For the American Bee Journal.

The Manufacture of Eggs and Combs.

S. F. NEWMAN, NORWALK, O.

EDITOR OF THE BEE JOURNAL.—I enclose an article on "Manufactured Eggs," the writer of which is evidently disgusted with certain editors who are constantly giving editorials on subjects about which they are totally ignorant—thus misleading the public. Recently editorials have appeared in the *Cleveland Leader* and *Chicago Advance*, both stating that honey-combs are made, filled with bogus honey, and capped, all done by machinery. A certain professor also gets a "dab" for his "scientific pleasantries." Possibly you may think the article worthy of a place in the AMERICAN BEE JOURNAL. It may be that the "traders" of comb honey can be reached by ridicule, if in no other way. Here is the article alluded to:

"PODUNK CORNERS, O.

TO THE EDITOR OF THE CHRONICLE:
Dear Sir:—How rapt in astonishment is the mind when it reverts back over a period of 50 or 60 years, and notes the wonderful discoveries,

improvements and inventions that have been made which tend to promote the comfort, happiness and welfare of mankind. The last of all these, but by no means the least useful, is the remarkable discovery of a process for manufacturing artificial eggs, upon which the editor of the *Cleveland Leader and Herald* has quite a lengthy editorial in his paper of Dec. 16, 1885. This discovery, like many others, seems to have happened just at the time when most needed, for, as we all know, eggs are now used for many purposes for which they were not formerly used, and their increased use has so increased the price that it has become quite burdensome; but it is more than probable that as soon as arrangements can be made for obtaining them by the new process, their price will be materially reduced so that all, the poor as well as the rich, can always be supplied with an abundance of this desirable 'fruit.'

"These eggs are so perfect and so like those obtained the usual way, that it is impossible to distinguish them from the genuine, and so far as we have tested them for culinary and scientific purposes they are fully equal. The editor of the *Cleveland Leader* is mistaken in saying they can be detected by boiling, and I think he does wrong to throw any obstacle in the way of this new enterprise.

"The gentleman who discovered the process by which these eggs are manufactured, resides in this county. He is a philanthropist of the highest order, constantly seeking to do that which will benefit his fellow men. He has distinguished himself in many ways as a scientist, and probably is not excelled in that direction by any living man. When these eggs were first tested to determine their hatching qualities, it was found that they were deficient in some very important ingredients. Although the chickens were perfectly formed, their bones lacked that firmness necessary for easy locomotion. A leading physiologist residing here, having been consulted, advised the inventor to mix pulverized bone with the albuminous part of the eggs. This advice was followed and worked admirably.

"There is another defect, however, which seems not to be so easily overcome. The young chickens are entirely destitute of feathers, and no way has yet been discovered to remedy the defect. The inventor held the theory that the feathers came from the yolk, and he thought that if a larger amount of carrots and saffron was used the feathers might be produced. I did not agree with him, for so far as my observation extended, I had never found any feathers in either of those plants, and a careful examination with the microscope failed to reveal any. The actual test of the matter proved that I was correct, for however much of carrots and saffron was used the feathers were not forthcoming. We have concluded, for the present at least, to give up experimenting in that direction, and to raise only summer chickens. Without doubt, if hatching is deferred until the first of May, and the chick-

ens housed during stormy weather, they can be raised without difficulty even if they have no feathers, and they can be killed for the early fall market.

"I think there will be a decided advantage gained in raising featherless chickens, on account of the vast amount of labor saved in picking them, for thus we shall be able successfully to compete with farmers who raise them the usual way. We can sell them much cheaper than they can, and still make a good profit.

"It may be a matter of curiosity to the editor of the *Leader* to know how the life-giving principle is imparted to these eggs. The human mind is ever reaching forth and grasping for new knowledge. After the inventor of these eggs found that they would answer nearly all purposes for which eggs are used, he began a series of experiments to bring them to such a state of perfection that they would hatch. He studied Huxley, Darwin and many other writers on the origin of life, all in vain, and after spending much time and money in his researches and experiments he had nearly given up in despair, when he found a certain 'wily' professor who was an astute scientist, remarkable for his wonderful attainments and profound scholarship. He also possessed the remarkable faculty of perpetrating 'scientific pleasantries' to a greater extent than any other man.

"Upon corresponding with this remarkable man, he learned that he also had been experimenting in the same direction, and had been successful; that he had actually fertilized the carrotic and albuminous substance of which these eggs are made, before it was placed in the shells, by subjecting it to a similar process to which fish-eggs are subjected in order to fertilize them. It was only after many trials that this 'wily' professor succeeded in accomplishing his object in a cleanly way, but at last his efforts were crowned with success.

"It is wonderful to read the Professor's description of this experiment upon this albuminous and carrotic mass. He says 'that at the very beginning of the operation the carrotic and saffronic ingredients begin to separate from the albumen and assume the spheroidal form, and in a moments the whole mass has the same appearance that eggs obtained the usual way would have, if carefully broken and emptied from the shells into a vat. Immediately after the formation of the yolks, the lime particles commence uniting in the form of slender white rings which float on the surface of the albumen. These rings grow both upward and downward, but more rapidly downward, by attracting to themselves the particles of lime which are floating in the albumen; and much quicker than I can describe the operation, about two-thirds of the shells are formed, the lower ends being complete and containing a sufficient amount of albumen to float the yolks, which at this stage of the process, as if possessed of life, glide quickly over the edge of the shells and fall into the receptacle prepared for them.

Immediately after this part of the operation is completed, the attraction of the shells for the particles of lime is transferred to their upper edge which grows rapidly until the perfect egg is formed. By a slight change in some of the manipulations, eggs can be made to differ somewhat in size."

"A stock company has already been formed, a site purchased, and as soon as the weather will admit, a building will be erected, and the eggs manufactured on an extensive scale; we expect to employ about 500 hands in the operation. We have \$2,000 worth of stock, the unsold part of which the editor of the *Cleveland Leader* can have at par. Without doubt there will be 'millions in it.' POULTERER."

[We are astonished that such papers as the *Cleveland Leader* and *Chicago Advance* should give publicity to such fabrications, particularly the *Advance*, a religious paper of the Congregationalists. The author of the falsehoods about the manufacture of comb and filling and sealing it by machinery, in the *Advance*, is a clergyman, and one of the managers of that paper—one who ought to be above doing injury to an honorable pursuit, by giving publicity to such a slanderous falsehood. See page 67.—ED.]

For the American Bee Journal.

Things "New" and "Old," etc.

JAMES HEDDON.

I wish to publicly thank the Rev. W. F. Clarke for his article on page 37, containing so many kind expressions and plain and vigorous words. It is pleasant to know that there are those with whom we have entered the arena of sharp contest in our own search for truth who still remain our friends, ever willing to give honor to whom they think honor is due. I must also thank nearly a hundred honey-producers who have privately expressed nearly the same sentiments.

I wish to publicly correct a few misapprehensions which time and nervous strength forbid my doing by private letters.

I will say first, that the new hive is not a "small one," the brood-chamber being equal to that of the 10-frame Langstroth hive, when not intentionally contracted to one sectional case, upon the system which I prefer, at the proper season.

2. I find its top surface (which is the same as the standard 8-frame Langstroth hive) ample for this locality, but it can quickly be increased to double that surface by placing the cases side by side.

3. It is not true, as many supposed, that the hive must necessarily be reversed or any of its parts inverted. In fact, the double-interchangeable brood-chamber system is the only one well adapted to secure most of the advantages gained by reversing.

4. It is a mistaken idea that this hive and system demand fall feeding for winter; on the contrary it is eminently adapted to wintering bees on natural stores, and that, too, of any preferred variety, and without any tedious manipulation; all of which is fully explained in my book.

5. Regarding the invention and patent: Several bee-keepers have written me that they have used substantially the same thing; full explanation, however, plainly revealed a mistake, and I predict that this will be repeated in every similar case.

I wish it understood that I do not claim the use of tightening-screws of all sorts, and adjusted in all manners; nor invertible, closed-end frames in all manner of adjustments; nor two-story brood-chambers of all kinds, any more than I claim an exclusive right to the use of wood, nails or paint in a bee-hive, simply because I use them in this one; but I do claim a certain number of arrangements which I consider the very best with which to construct a hive so that any frame can be reversed at will, or any number of frames may all be reversed together at will, without any addition or subtraction of parts or extra manipulation; so that we may accomplish the great bulk of necessary work by manipulating a number of frames at once, instead of singly; that we may cut out queen-cells or introduce the same; shake our bees nearly all clear from the combs with a single motion; find queens almost instantly; and many other useful manipulations which I will not repeat here; in fact my claims cover any hive mechanically constructed like mine in one or more of its essential features for the purposes specified. We discover principles, but we patent the mechanical arrangement by which these principles are applied; not in all their details, however.

While I have not endeavored to cover all methods of constructing one brood-chamber in two horizontal sections, the idea was original with me, being the outgrowth of a conception of an improved system of management. If it is worthless, it will fall, together with my opinions regarding it; but if it is what a trial of two seasons compels my students, Mr. Hutchinson and myself to believe, I shall rest content with the thought of being the first to systematize it, impress it upon the minds of my fellow bee-keepers, as well as putting it forth clothed in what I believe to be the best general mechanical construction, the minor details of which may change at any time, for this invention is confined to no particular size, shape or number of pieces.

Many letters received prompts the following words of caution: Do not hastily adopt this or any other improved hive, at a sacrifice. My colonies in improved Langstroth hives, on straight worker-combs (a majority with reversible frames) will not be transferred soon. The new hive will be adopted in my apiaries only as fast as increase and other changes in harmony with economy will warrant. This course I consider best for all.

Local Convention Directory.

1886. Time and place of Meeting.

- Feb. 4.—Wisconsin State, at Madison, Wis.
Dr. J. W. Vance, Sec., Madison, Wis.
- Feb. 11.—Rhode Island, at Providence, R. I.
Geo. A. Stockwell, Sec., Providence, R. I.
- Feb. 16-18.—New York State, at Rochester, N. Y.
F. C. Benedict, Sec., Perry Centre, N. Y.
- Feb. 17, 18.—Cedar Valley, at Laporte City, Iowa.
H. E. Hubbard, Sec., Laporte City, Iowa.
- Apr. 27.—Des Moines County, at Burlington, Iowa.
Jno. Nau, Sec., Middletown, Iowa.
- Oct. 19, 20.—Illinois Central, at Mt. Sterling, Ills.
J. M. Hambaugh, Sec., Spring, Ills.

In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

Report for the Past Season.—W. K. Williams, Buffalo, N. Y., on Jan. 26, 1886, writes:

In the fall of 1885 I had 20 colonies packed with leaves in chaff hives. I lost 8 in wintering and sold 2, which left 10 to start the season with on May 1, from which I had a yield of 1,500 pounds of extracted honey (all white clover and basswood) besides enough left in the combs to feed up with in the spring; and I put 20 colonies into winter quarters last fall.

Snow-Storms in Kansas.—Nathan Davis, Wyckoff, Kans., on Jan. 18, 1886, says:

My bees are wintering well on the summer stands. They stored some nice comb honey in one-pound sections last summer from sweet clover. They worked on it for 6 weeks. I also gathered a nice lot of seed from it, and I think that I will sow two acres next spring. We had the worst snow-storm on Jan. 7 that I have ever seen in Kansas; the mercury was as low as 16° to 18° below zero, and the loss of stock in western Kansas is very heavy, and a great many people were frozen to death.

Bee-Keeping in Nebraska.—Wm. F. Ware, (5-14), De Witt, Nebr., on Jan. 22, 1886, says:

I agree with the Rev. G. T. Willis (page 41) that it does not pay to keep many bees in Nebraska; not so much on account of the scarcity of white clover, but on account of the poor honey market. Four years ago I commenced keeping bees, and the first two years I sold all of my extracted honey at 20 cents per pound; the next year at 15 cents per pound, and carried more than half of it until July. Thinking that perhaps comb honey would sell better than extracted, I worked my apiary for comb honey; but I find that it retails slowly at only 15 cents per pound in sections, and extracted at 10 cents per pound. During all the time I have not re-

ceived \$10 in cash, but took it out in goods at the store, allowing a commission of 10 to 15 per cent. for selling. I have tried to make it attractive by labels and packages. In the fall of 1884 I put 9 colonies in the cellar, and lost 4 in the spring, thus leaving 5, and 2 of them were very weak. During the summer I increased them to 14 strong colonies, and took 350 pounds of comb honey and 325 pounds of extracted. I have 150 sections of comb well drawn out for this year's work.

Report for 1885.—A. Eastman, Union, Ills., on Jan. 26, 1886, says:

Noticing the report of Dr. Miller, page 44, showing such poor results, and as I live within 7 miles of his apiary, I thought I would report how I succeeded with my bees. I commenced the spring of 1885 with 16 colonies, 3 of which were so weak that it took all summer to build them up; so I had only 13 that I got any surplus from. I secured 400 pounds of comb honey in sections, increased my apiary to 24 colonies, and bought 4 more, so I now have 28 colonies in the cellar. They appear to be doing well in a temperature of 42°. I sold my honey at home for 15 cents per pound, and could have sold a great deal more.

Candy for Winter Feeding.—R. Metzler, Odessa, Ont., on Jan. 20, 1886, writes:

How can I make candy to feed my bees, for laying on the frames under the cushions, so that they will be disturbed as little as possible?

[Use 4 parts of coffee A sugar, and 1 part of water; simmer until it becomes quite hard on being cooled; mould it into frames of one-inch thickness, and lay it on the top of the frames, using sticks underneath ½ inch square, to give the bees free access to it, and the heat of the hive will keep it warm and soften it.—ED.]

Reversible Hives, etc.—W. T. F. Petty, Pittsfield, Ills., on Jan. 23, 1886, writes:

I notice on page 35 that Mr. James Heddon has a new hive, with the brood-chamber in two sections. I made a hive 4 years ago, to be used in this way, and made 75 of them last year. I move my bees in the fall to the river bottom, 11 miles away, and with the shallow frame there is no danger of the combs breaking down. The deep hanging-frame has many disadvantages, such as being clogged with honey in the top part, etc. With the chamber in two parts the top can be taken off and the honey extracted from it, and placed below without having to handle all the brood. I use the same case to hold sections with section-holders. My frames rest on metal strips nailed to the bottom end of the case, projecting enough inside to catch the frame. I have also an

improved section which I make by cutting grooves on the inside of the sides of the section, so a thin piece of wood can be slid in, thus making a box which protects the comb from injury and dampness; on the thin wood slides all necessary printing can be done. I have thought of sending one of my hives to the BEE JOURNAL Museum, but I have neglected to do so. I will as soon as I can.

Extracted Honey vs. Comb Honey, etc.—Frank Wilcox, Mauston, Wis., says:

Have any of the bee-keeping fraternity demonstrated by carefully conducted experiments how much more extracted than comb honey can be produced? Comparing one apiary with another apiary will not decide it, because the pasturage will be different. Comparing 2 colonies apparently alike will prove nothing, because the yield might have been different had they been run for the same. Working a certain number of colonies for comb, and a certain number of other equally as good colonies for extracted honey, in the same apiary during the same season, and getting the average of each, spring count, is the only method that I can think of that will give results of any value. The comparative cost of labor, material, etc., is not required in this question. Another thought: By the laws of Wisconsin selling adulterated honey for pure honey is a criminal act. Words publicly charging a man with criminal acts are actionable, in suits of libel, I believe.

Very Cold Weather.—Emil J. Baxter, Nauvoo, Ills., on Jan. 15, 1886, says:

My 230 colonies of bees are wintering on the summer stands packed *a la* Dadant. We have had very cold weather lately—22° below zero. It is warmer now, and from all appearances my bees seem to have come through the recent cold spell all right.

A Woman's Experience.—Mrs. Sallie E. Sherman, of Salado, Texas, gives the following as her experience with the use of Alley's drone and queen trap:

On March 14, 1884, my son and only child came home from College sick. His disease was typho-malarial fever, which lasted 72 days; during which time my bees increased from 20 to 48 colonies by natural swarming. Had it not been for two of the Alley drone and queen traps that I had, it would have been impossible for me to have secured half the swarms and at the same time nursed and taken care of my son. As it was, when a swarm began to come out, I put a cage at the entrance, and by the time I could get an empty hive in place with a few frames of brood from the parent colony in it, and the foundation all right, the bees would miss their queen

and come back pell-mell in search of her, and thus enter the new hive at once. In about 20 minutes the bees were hived and went to work at once, without further trouble or ado, and I was back in the house with my son. In hiving them thus, I moved the old hive to a new location, and put the new one in its place, and let the queen run in with the bees. It was a beautiful sight to me to see my golden Italians come pouring in a stream, so to speak, from the top of a tall elm-tree into their new hive, without any climbing of trees or sawing of limbs, without disfiguring the symmetry and beauty of a favorite shade tree. I had no help, except a neighbor's little boy, who, after doing his chores at home, came over and remained a few hours in the middle of the day to watch the bees and tell me when they were swarming. I would about as soon think of going back to the old "gum" as doing without the drone and queen trap.

Mangroves Frozen in Florida.—W. S. Hart, Hawk's Park, ☉ Fla., on Jan. 18, 1886, says:

We have just had a frost (mercury down to 20° above zero) that has killed a large part of our mangroves. It would be well for those apiarists who contemplate starting for this region soon, to note that the conditions are somewhat changed here, for the present, in their line.

Bees Bringing in Pollen, etc.—Alderman & Roberts, Wewahitchka, ☉ Fla., on Jan. 19, 1886, write:

We have had the coldest winter known here for over 23 years. A great many bees are dead, but those that are living are having a good time now bringing in lots of pollen. We have about 1,000 colonies of bees, and expect a good flow of honey this season. The honey gathered here in the spring, in April and May, cannot be excelled in quality. The summer honey-flow is very good, but not as fine as that of the spring. The bloom from which the first quality is gathered, is from gum, and is in abundance along the Apalachicola and Chipola rivers. The average per colony here is 8 gallons.

The Early Part of Winter.—John Morris, Mauston, ☉ Wis., on Jan. 5, 1886, writes:

The past fall was a very mild one, with but very little rain indeed, so that the water in our wells was very low, and fall plowing was pretty dry work, whilst all high winds and rough weather avoided this section of the country. It can be imagined that we got along very nicely, and that every one expected an open or mild winter, which, of course, to a bee-keeper is very pleasant to anticipate. But the first week in December brought us up to the winter pitch, and we concluded once more to submit to the rigors of winter; yet in a few days thereafter it was as mild and fair as

ever, excepting that we had a good body of snow on the ground. But a change came over all of this; the wind veered around into the north and it appeared as though the tropical regions had swung around to the arctic side of us to give us the same soft winds, mists and fogs, and now for the last eight or ten days it would rain a while, then it would snow a little, so that sleet and snow and rain was the order of the days until again we have 5 or 6 inches of snow and ice. In future years the first part of the winter of 1885-86 in Wisconsin, will not be spoken of as being cold or the coldest.

Severe Frosts in Florida.—Jesse Oren, Hawk's Park, ☉ Fla., on Jan. 14, 1886, writes:

We had severe frosts here on the nights of Jan. 10 and 11, forming ice 1½ inches thick, and very seriously injuring the orange crop and stock. The mangroves are said to be destroyed, which causes the mercury of contentment to run very low among bee-men here. In February of 1835 the mercury sank to 7° at St. Augustine, making a clean sweep of all orange trees, mangroves and other semi-tropical trees. At this last freeze 18° above zero was the depression at New Smyrna, 3 miles north of Hawk's Park. Mr. Rudolph Sheldon, an old settler and a first-class bee-man here, says that the mercury fell to 18°, as observed by him, but that others had reported it 10° at New Smyrna. St. Augustine is 65 miles north of New Smyrna. I do not know anything about the depression at St. Augustine at this time, but if the mercury fell to 7° there in 1835, it may be near that this time. Mr. Sheldon says that he is going about 150 miles south of this place next week, to hunt up a locality where the mangroves may not be killed.

How I Began Bee-Keeping, etc.—Jacob Oswalt, Maximo, ☉ O., on Jan. 25, 1886, writes:

I have been a careful reader of the AMERICAN BEE JOURNAL for the last 3 years, and I must say that I have received a vast amount of useful knowledge in bee-culture from the perusal of its pages. I have had just 5 years experience in bee-keeping. In the spring of 1881 I was among my maple trees cleaning snow out of the sap-crocks, and as I was passing along I discovered bees flying on the snow; from what our pioneer fathers used to say, I supposed that I was near a bee-tree. I looked around in the tops of several large trees, and discovered bees passing to and from the limb of a large elm tree, about 75 feet from the ground. In May I transferred the colony from the limb, without cutting the tree, and I call it my pet, or my first colony. In some future number I will describe how I transferred my first colony from the tree to the hive. I now have 20 colonies of hybrid bees all snugly tucked away in Falcon chaff-hives, and doing well,

so far as I know. Last winter I wintered 9 colonies in chaff hives on the summer stands, without losing any, and last summer I increased them to 20.

Small vs. Large Hives.—Ch. Dadant, Hamilton, ☉ Ills., writes:

In closing our lengthy discussion on this subject, Mr. Hutchinson has given us victorious (?) arguments. I will cease to argue; but I will make a simple assertion, the correctness of which I leave the readers to judge. It is this: A method of bee-culture which forces all the honey into the surplus apartment, whether by contracting, reversing, or by using too small hives, or by all these methods together, and forces the apiarist to feed back his honey till the next crop, or till winter, and for winter—such a method, I say, will never suit the majority of the practical bee-keepers, who will always try to leave their bees enough honey for their wants, whenever practicable.

I thank Mr. Hutchinson for his compliment, on page 38, and for his courteous manner, as an apiarist; and I hope that our amicable dispute has been of some use to others.

Convention Notices.

☞ The annual meeting of the Rhode Island Bee-Keepers' Society will be held on Feb. 11, 1886, at Providence, R. I. GEO. A. STOCKWELL, Sec.

☞ The Cedar Valley Bee-Keepers' Association will hold its winter meeting at the City Hall in Laporte City, Iowa, on Feb. 17 and 18, 1886. Reduced rates are offered at the hotels. A very complete programme is prepared with ample time to discuss subjects of importance to bee-keepers. A cordial invitation is extended to all to be present.

H. E. HUBBARD, Sec.

☞ The Illinois Central Bee-Keepers' Association will hold its next meeting at Mt. Sterling, Ills., on Tuesday and Wednesday, Oct. 19 and 20, 1886.

J. M. HAMBAUGH, Sec.

☞ The Seventeenth Annual Convention of the New York State Bee-Keepers' Association (formerly the Northeastern) will be held in Rochester, N. Y., on Feb. 16, 17 and 18, 1886. This will be one of the largest meetings ever held in the State. A large number of our most experienced bee-masters will take part in the discussions, and several essays will be read from a number of our most practical apiarists throughout the country. The programme is complete. If you are young in the work you can not afford to stay away—if older, you may give some good hints, if you get none. We want a good display of all kinds of supplies and fixtures. We have a room on purpose for exhibits, and any goods sent to the Secretary in care of the "National Hotel," Rochester, N. Y., will be placed on exhibition, and either sold or returned to the exhibitor, as directed. Reduced rates at the hotels have been secured, also rates on some of the railroads. All will have to pay full fare one way—return ticket at 1-3 fare by presenting certificate from the Secretary, who will furnish them on application. We want an active vice-president in every county in State. Please name one or send the name of some one, for your county.

F. C. BENEDICT, Sec.



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 923 & 925 WEST MADISON ST., CHICAGO, ILL.
 At One Dollar a Year.

ALFRED H. NEWMAN,
 BUSINESS MANAGER.

Special Notices.

The NEW Heddon Hive.—We have made arrangements with the inventor, by which we shall make and sell the Heddon Reversible Hive, both at wholesale and retail; nailed and also in the flat. Further announcement will be made next week, giving prices, etc.

Our rates for two or more copies of the book, "Bees and Honey," may be found on the Book List on the second page of this paper. Also wholesale rates on all books where they are purchased "to sell again."

To Correspondents.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

"Don't Stop"—that is what many write to us about their papers, when their time is nearly out. One subscriber says: "This has been a year of disaster, and it is not convenient for me to send you the money now to renew my subscription. It runs out with this month; but don't stop sending it. I will get the money to you within three months." Such letters are coming every day, and so for the present we have concluded not to stop any papers until requested to do so.

When renewing subscriptions please send an extra name or two with your own and secure a premium. We have some colored Posters, which we will send FREE, to put up in conspicuous places. We will with pleasure send sample copies to any one who will try to get up a club.

Preserve your papers for reference. If you have no **HINDER** we will mail you one for 75 cents, or you can have one FREE if you will send us 4 new yearly subscriptions for the BEE JOURNAL.

A Brief History of the North American Bee-Keepers' Society, with a digest of its 15 Annual Conventions, and a full Report of the Proceedings of the 16th Annual Convention held at Detroit, Mich., on Dec. 8 to 10, 1885. This is the title of a new pamphlet of 64 pages just issued at this office. Price, 25 cents.

To compile this history and digest of all the past meetings of the Society, has taken much time and labor, and we have no doubt but that it will be duly appreciated by the apiarists of North America.

This pamphlet also contains engravings of the principal honey-plants, and portraits of the Rev. L. L. Langstroth, of Ohio, and Moses Quinby, of New York; two of the pioneers who helped to revolutionize American apiculture, and usher in a new era.

When Renewing your subscription please try to get your neighbor who keeps bees to join with you in taking the BEE JOURNAL. It is now so cheap that no one can afford to do without it. We will present a **Binder** for the BEE JOURNAL to any one sending us four subscriptions—with \$4.00—direct to this office. It will pay any one to devote a few hours, to get subscribers.

Beeswax Wanted.—We are now paying 24 cents per pound for good, average, yellow Beeswax, delivered here. Cash on arrival. Shipments are solicited. The name of the shipper should be put on every package to prevent mistakes.

Agents can sell the Guide and Hand-Book like "hot-cakes." Send us an order for five copies (with \$2.50) and we will send you the Weekly BEE JOURNAL free for a year. This is a rare opportunity to get the Weekly BEE JOURNAL without cost!!

Sample Copies of the BEE JOURNAL will be sent FREE upon application. Anyone intending to get up a club can have sample copies sent to the persons they desire to interview by sending the names to this office, or we will send them all to the agent.

Perforated-Zinc.—We have laid in a stock of perforated zinc, for excluding drones and queens, and can fill orders for any size of pieces or quantity at 15 cents per square foot, or in full sheets 3x8 feet at \$2.75 per sheet. We also have pieces cut to fit the Langstroth hive—19"x14"—Price 25 cents each.

All the Numbers from the beginning of the year are sent to new subscribers, unless otherwise ordered.

The Guide and Hand-Book, is a book of ready reference and an encyclopædia of everything desirable to know. As a guide to the home-seeker, it is invaluable. Its contents are partially given on page 64, and will convince any one of its value. We do not think any of our readers can afford to do without it. As a book of ready reference we find it of great value in our library. We will send the Weekly BEE JOURNAL for a year and the Guide for \$1.30

OUR CLUBBING LIST.

We supply the **American Bee Journal** one year, and any of the following publications, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

Price of both. Club

| | | |
|-----------------------------------|--------|------|
| The American Bee Journal | 1 00.. | |
| and Gleanings in Bee-Culture..... | 2 00.. | 1 75 |
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| Bee-Keepers' Guide..... | 1 50.. | 1 40 |
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| New York Independent..... | 4 00.. | 3 50 |
| American Agriculturist..... | 2 50.. | 2 25 |
| American Poultry Journal..... | 2 25.. | 1 75 |
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| and Cook's Manual..... | 2 25.. | 2 00 |
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| Binder for Am. Bee Journal..... | 1 75.. | 1 60 |
| Aplary Register—100 colonies..... | 2 25.. | 2 00 |
| Dzierzon's Bee-Book (cloth)..... | 3 00.. | 2 00 |
| Dzierzon's Bee-Book (paper)..... | 2 50.. | 2 00 |
| Quinby's New Bee-Keeping..... | 2 50.. | 2 25 |
| Langstroth's Standard Work..... | 3 00.. | 2 75 |
| Root's A B C of Bee-Culture..... | 2 25.. | 2 10 |
| Alley's Queen-Rearing..... | 2 50.. | 2 25 |
| Farmer's Account Book..... | 4 00.. | 3 00 |
| Guide and Hand-Book..... | 1 50.. | 1 30 |
| Heddon's book, "Success,"..... | 1 50.. | 1 40 |

System and Success.

All who intend to be systematic in their work in the apiary, should get a copy of the **Aplary Register** and commence to use it. The prices are as follows:

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| For 50 colonies (120 pages)..... | \$1.00 |
| " 100 colonies (220 pages)..... | 1 25 |
| " 200 colonies (420 pages)..... | 1 50 |

The larger ones can be used for a few colonies, give room for an increase of numbers and still keep the record all together in one book, and are therefore the most desirable.

To any One sending us one new subscriber with their own renewal (with \$2.00), we will present a copy of the new "Convention History of America."

Are you Entitled to a pension? You may be and may not know it. If you examine the Guide and Hand-Book you will soon find out. Thousands of things worth knowing will be found in it. The BEE JOURNAL for 1886 and the Guide Book will both be sent for \$1.30.

Any person not a subscriber, receiving a copy of this paper, will please consider it an invitation to become a subscriber to it.

Cash in Advance is the rule, but no longer than six months of grace can be allowed on the small sum of \$1.00. Subscriptions may commence at any time, and discontinuances may be ordered at any time, when arrearages are paid up.

The Time for Reading has now come. The long winter evenings can be utilized by reading up bee-literature. We have all the newest bee-books and can fill all orders on the day they are received.

Honey and Beeswax Market.

Office of the AMERICAN BEE JOURNAL,
Monday, 10 a. m., Feb. 1, 1886.

The following are the latest quotations for honey and beeswax received up to this hour:

CHICAGO.

HONEY.—There is an easier tone to the comb honey market, and prices are fully one cent per pound less than at last quotations, 15c. being the price for white comb honey in 1-lb. sections, and some extra nice brings 16c. This is owing to small lots coming into different commission houses, and all being eager to sell, they underbid regular honey houses in order to do so. Extracted honey brings 8c. per lb.
BEESWAX.—24@26c.
R. A. BURNETT, 161 South Water St.

NEW YORK.

HONEY.—The market for honey continues dull, and prices are ruling lower; however, if the cold weather continues, it may improve the trade in a short time. We quote as follows: Fancy white comb in 1-lb. paper cartons, 13c@14c; the same in 1-lb. glassed or unglazed sections, 12c@13c; the same in 2-lb. glassed sections, 9c@10c, and in unglazed sections, 8c@9c. Buckwheat honey in 2-lb. sections, glassed, 9c; in 1-lb. sections, glassed or unglazed, 10c@11c. Extracted—white clover 8c@9c; buckwheat, 5c@6c.
BEESWAX.—Prime yellow, 26@28c.
MCCAUL & HILDRETH BROS., 34 Hudson St.

ST. LOUIS.

HONEY.—The market is quiet and the demand light just now. We quote prices as follows:—Choice comb honey, 10c@12c. Extracted, in barrels, 4c@5c. Extra fancy of bright color and in No. 1 packages, 1/2 advance on above prices.
BEESWAX.—Firm at 22c. for prime.
D. G. TUTT & CO., Commercial St.

CINCINNATI.

HONEY.—There is a very slow demand from manufacturers, for extracted honey, with a large supply on the market, while the demand is very good for clover honey in square glass jars. Prices for all qualities are low and range from 4c@5c a lb. Supply and demand is fair for choice comb honey in small sections, which brings 12c@15c. per lb.
BEESWAX.—Good yellow is in good demand, and arrivals are fair, at 20c@22c. per lb.
C. F. MUTH & SON, Freeman & Central Ave.

CLEVELAND.

HONEY.—The market is not quite as active as it has been, owing, no doubt, to many attractions of the Holiday Season. Best white, 1-lb. sections sell at 15c., and 2-lb. for 13c@14c., but there is not so much sale for the latter. Second grade honey is dull at 12c@13c. Old white, 10c@12c. Extracted, 7c@8c. per lb.
BEESWAX.—Very scarce at 22@25c.
A. C. KENDEL, 115 Ontario Street.

KANSAS CITY.

HONEY.—Sales are extremely light and prices are very low. Choice comb honey in 1-lb. sections brings 14c@15c.; 2 lbs., 12c@13c. Dark fa. 1 honey 1 to 2 cents less. Extracted honey is very dull and of slow sale. We had to unload a lot of very the extracted honey this week at 5c., and stocks continue to accumulate.
BEESWAX.—Scarce and higher—22@25c.
CLEMENS, CLOON & CO., cor. 4th & Walnut.

BOSTON.

HONEY.—It is selling very well but prices are very low, and we are often obliged to shade our prices in order to make sales. We quote comb honey in 1-lb. sections at 14c@16c., and 2-lb. sections at 12c@14c. Extracted, 6c@8c.
BEESWAX.—30 cts. per lb.
BLAKE & HIPLEY, 57 Chatham Street.

SAN FRANCISCO.

HONEY.—Choice comb honey is in light supply and is bringing firm figures. There is a fair movement in best qualities of extracted at steady rates. We quote as follows: White to extra white comb, 11c@12c.; amber, 7c@8c. Extracted, white liquid, 5c@5c.; light amber colored, 4c@4c.; amber and candied, 4c.; dark and candied, 4c@4c.
BEESWAX.—Quotable at 23c@25c., wholesale.
O. B. SMITH & CO., 423 Front Street.

Bee-Keepers' Badges at Fairs.



We have some ELEGANT RIBBON BADGES, having a rosette and gold Bee, for bee-keepers' use at Fairs, Conventions, etc. Price 50 cents each, by mail, postpaid.

THOMAS G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

BEE-HIVES, SECTIONS,

Foundation & Apiarian Supplies.

Having a large stock of sections on hand we will all orders in Feb. at the following prices:

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| 4 1/2 x 4 1/4, in lots of 500 to 4,000, (per 1,000), | \$5.00 |
| " " " " " " " " | 4.75 |
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4 1/2 x 4 1/4, at same prices. All V-grooved.

Our Section-Cases and Shipping-Crates are as good as any in the market, and at correspondingly low prices.

For description and prices of the **SUCCESS HIVE**, send for Price-List. Estimates given on all other Hives.

QUEENS AND BEES FOR 1886.

We make a specialty of rearing the **ALBINO QUEENS AND BEES**. Price-List free.

S. VALENTINE & SON, Hagerstown, Md.
44 Ct

BEES, bee-hives, imported queens—first-class—cheap. **OTIS N. BALDWIN, Clarksville, Mo.**
4Aly

1869.

Armstrong's

Perfection

CROWN



HIVE.

1886.

The brood-frames, honey-rack, and section-boxes are all **Reversible**.

At the St. Joseph and St. Louis, Mo., Expositions in 1885, it took the first premium over several of the most prominent bee-hives now in use.
Illustrated Catalogue sent free. Address,
5D13t **E. ARMSSTRONG, Jerseyville, Ill.**

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

(ESTABLISHED 1864.)

BEE-SUPPLIES.

Wholesale and Retail.

We furnish EVERYTHING needed in the Apiary, of practical construction, and at the lowest price. Satisfaction guaranteed. Send your address on a Postal card, and we will send you our Illustrated Catalogue free.
5D12t **E. KETCHUMER, COBURG, Montgomery Co., IOWA.**

Italian Bees and Queens.

Having again located at Nappanee I will be better prepared than ever to furnish **BEES AND QUEENS**, the coming season, to my friends and customers, as I have a large Apiary of Syrian Bees in the South, and one of Pure Italians here to draw from. Send for Price-List.

Address, **I. R. GOOD,**5C2t **NAPPANEE, IND.**

Carp

The National Journal of Carp-Culture.

—ESTABLISHED IN 1885.—
(8-Page Monthly, Illustrated, 50 cents a year.)

The only Journal in the United States devoted to the interests of Carp-Culture. Sample free.

Address,
2C6t **L. B. LOGAN, Akron, Ohio.**

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HUMAN CULTURE

Devoted to Physical, Mental, Moral, and General Self-Improvement, will be sent for the **THREE** next Three months free to any one who says where he saw this, and sends us his address, together with 10 cents to pay postage, etc. Remember that this **MONTHS** chance is not open long and should be accepted at once. We have secured a number of the most able contributors who will supply our columns during **FREE** 1886 with choice articles upon those all-important subjects. It is worth its weight in gold to everybody. Subscription price is only \$1.00 per year. Agents wanted everywhere. Address,

M. S. WEBER, Pub., FARMERSVILLE, PA.
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BEE-KEEPERS' GUIDE;

Or, MANUAL OF THE APIARY.

12,000 SOLD SINCE 1876.

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More than 50 pages, and more than 50 fine illustrations were added in the 8th edition. The whole work has been thoroughly revised, and contains the very latest in respect to bee-keeping. It is certainly the fullest and most scientific work treating of bees in the World. Price, by mail, \$1.25. Liberal discount to dealers and to clubs.

A. J. COOK, Author and Publisher, Agricultural College, Mich.
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For sale also at the Office of the **BEE JOURNAL**, at wholesale or retail.

CEDAR FALLS APIARIES.

1,000 pounds of Bees for Sale.

Apr. May June July After
Carniolan Queens, tested, \$2.50 \$2.25 \$2.00
Italian Queens, tested, 3.50 3.00 2.50 2.00 1.80
Hybrid Bees, per pound, 1.50 1.25 1.00 .80 .60
Brood, per card, same as per pound of bees.

Empty Combs, on foundation and wired frames 16 cents each. Second-hand Langstroth hives, 75c. Untested Queens, half the prices of tested Queens. Newfoundland pups \$10.00. Address,

2C6t **A. J. NORRIS, Cedar Falls, Iowa.**

Fruit-Farm & Apiary

FOR SALE CHEAP!

96 ACRES, hill-land, 1/2 well-stocked with apples, peaches, pears, plums, quinces, grapes, and small fruit, in fine bearing condition. The remainder is in pasture, grass, grain, etc. Apiary contains **140 ITALIAN COLONIES** in Langstroth hives. Bee-house and all modern appliances for apiculture, in as good location for bees and honey as can be found. Good 10-room house, beautifully located, commanding a view of the city, river and surrounding country. New barn and out-buildings, cistern, never-failing springs, etc. Reasons for selling—age and ill-health.

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Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

1886.

ALLEY'S

1886.

Combined Drone and Queen Trap.

A perfect non-swarming arrangement. Send and get them by the quantity, in the flat, and sell to your bee-keeping friends. Every bee-keeper will purchase one or more who examines them. Send for wholesale prices. Circulars free.

HENRY ALLEY & CO.,5D14t **Wenham, Essex Co., Mass.**

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.



Bingham Smokers

AND

HONEY-KNIVES.

Send for Circulars.

Bingham & Hetherington,**ABRONIA, MICH.**

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BEESWAX.

We pay 24c. per lb., delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

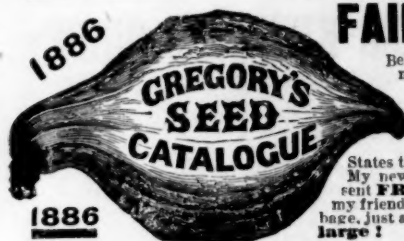
THOS. G. NEWMAN & SON,

923 & 925 West Madison Street, CHICAGO, ILL.

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.

Atf **J. VANDERVORT, Laceyville, Pa.**



FAIR AND SQUARE DEALING.

Believing that if a man has dealt squarely with his fellow-men his patrons are his best advertisers, I invite all to make inquiry of the character of my seeds among over a million of Farmers, Gardeners and Planters who have used them during the past thirty years. Raising a large portion of the seed sold, (few seedsmen raise the seed they sell) I was the first seedsman in the United States to warrant (as per catalogue) their purity and freshness. My new Vegetable and Flower Seed Catalogue for 1886 will be sent **FREE** to all who write for it. Among an immense variety, my friends will find in it (and in none other) a new drumhead Cabbage, just about as early as Henderson's, but **nearly twice as large!** **James J. H. Gregory, Marblehead, Mass.**

SECTIONS CHEAPER THAN EVER.
THE "BOSS" ONE-PIECE

SECTIONS.



Patented June 28, 1881.

Bee-keepers will find it to their interest to send for our Price-List, just issued, before they order their sections for the season of 1886. We have our machinery in tip-top order, and can turn out more sections per hour than any other manufacturers in the United States; therefore we can fill orders on very short notice.

J. FORNCROOK & CO.,

5Ctf Watertown, Wis., Jan. 15, 1886.

Thos. G. Newman & Son, of Chicago, sell the one-piece Sections manufactured by us.

BEE HIVES,

One-piece Sections, Section-Cases, Frames, &c., of superior workmanship.

SMITH & GOODSELL,

Manufacturers and dealers in Apian Supplies and Barrel Churns. Send for price-list.

Rock Falls, Whiteside Co., Ills.

51Dct.

THE VICTOR HIVE

It is pronounced by competent apiarists to be the Best Hive for comb honey. It is operated on a new principle, the passage-ways being continuous through perforated zinc to the sections. Our dovetailed White Poplar Sections, with or without side passages, cannot be excelled in accuracy or smoothness. They are as nearly perfect as can be made. Sample of the new sections for 2 one-cent stamps. Catalogue on application.

Address, **DR. G. L. TINKER,**

3Dtf NEW PHILADELPHIA, OHIO.

BARNES' FOOT-POWER MACHINERY.



Read what J. I. PARENT, of CHARLTON, N.Y., says—"We cut with one of your Combined Machines, last winter, 50 chaff hives with 7-in. cap, 100 honey-racks, 500 broad frames, 2,000 honey-boxes and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make and we expect to do it with this Saw. It will do all you say it will." Catalogue and Price-List

Free. Address, **W. F. & JOHN BARNES,**

45Ctf No. 484 Ruby St., Rockford, Ill.

HEAD-QUARTERS IN THE SOUTH

For the manufacture of

Bee Keepers' Supplies

Dunham and Root Foundation a specialty. Italian Queens and Bees from March to November.

Send for my Illustrated Catalogue.

5Ctf **PAUL L. VIALLO, Bayou Goula, La.**

1886. ITALIAN QUEENS. 1886.

6 Warranted Queens for \$5.

Write for circular. No circulars sent this year unless called for.

3Ctf **J. T. WILSON,**

NICHOLASVILLE, Jessamine Co., KY.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

DRAKE & SMITH,

Successors to A. E. Manum, Bristol, Vt.

MANUFACTURERS OF THE BRISTOL Bee-Hive, the Standard Hive of Vermont. **Section Honey-Boxes,** all sizes, made from White Poplar, (the best timber in the world for honey-boxes), 1-pound boxes a specialty. Clamps, Separators and Wood Slides. **Lightning Oilers, Shipping Crates,** Bee Escapes, Bee Feeders, and Manum's Bee Smokers—all made of the best material and in a workmanlike manner. Send stamp for Illustrated Catalogue and Price-List. 46D12t

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